

REMARKS

The Final Office Action of December 2, 2008, has been reviewed by the Applicants. No claims are amended or cancelled. New claim 23 has been added. Claims 1-9 and 11-23 remain pending. Applicants request reconsideration.

Claims 1-9 and 11-22 were rejected under 35 U.S.C. 103(a) as allegedly being obvious over Imuta (U.S. Pat. Pub. 2002/0156207) in view of Qian (U.S. Patent No. 6,407,155). Applicants traverse the rejection.

Applicants previously argued that Imuta did not disclose the use of a nanofiller intercalated with an intercalating agent comprising a quaternary ammonium compound.

In the Office Action, the Examiner cited Qian as showing the claimed clay being intercalated with quaternary ammonium compounds was a known reinforcing filler. The Examiner reasoned that it would be prima facie obvious to use the clay of Qian in the composition of Imuta given the recognized advantages associated with the intercalated clay.

Not all claim limitations are disclosed. In particular, Qian does not disclose a nanofiller having a particle size of 1 to 100 nanometers.

Qian discloses an intercalated material prepared by reacting a layered material, with a coupling agent and an onium ion. However, Qian does not disclose the particle size of his intercalated material. Qian refers to the spacing between the layers of the intercalated material (also called the d001). See for example col. 5, lines 38-50 and col. 21, lines 55-62. However, intercalation itself does not delaminate the layered material, so a particle size of 1 to 100 nanometers is not obtained.

Thus, the claims are not obvious.

Applicants also note that Qian requires the use of a silane coupling agent as well. See col. 2, lines 24-62. Applicants have added new claim 23, which states that the nanofiller is intercalated with only the quaternary ammonium compound. This claim includes a second basis for excluding the intercalates of Qian from being combined with the polymer of Imuta.

CONCLUSION

For the reasons detailed above, it is respectfully submitted all claims remaining in the application (Claims 1-9 and 11-23) are now in condition for allowance. Withdrawal of the rejections and issuance of a Notice of Allowance is requested.

In the event the Examiner considers personal contact advantageous to the disposition of this case, he is hereby authorized to call Richard M. Klein, at telephone number 216-363-9000, Cleveland, OH.

If it is determined that additional fees are due, authorization is hereby given for deduction of those fees, other than the issue fees, from Deposit Account No. 06-0308.


Respectfully submitted,

FAY SHARPE LLP

Date

3/2/09


Richard M. Klein, Reg. No. 33,000
Richard J. Minnich, Reg. No. 24,175
The Halle Building, Fifth Floor
1228 Euclid Avenue
Cleveland, OH 44115
216-363-9000

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